

KOTKOV, I. I.

Tipovye planirovki proizvodstvenno-khoziaistvennykh brigadnykh dvorov i zhivotnovodcheskikh ferm kolkhozov /Standard plans for farm buildings and for livestock sections of collective farms/. Kiev, Akad. arkhitekt. USSR, 1952. 114 p.

SO: Monthly List of Russian Accessions, Vol 6 No 6 September 1953

INOZENTSEV, G.B.; KOTKO, M.N., red.

[New methods of finishing bent furniture; based on the materials of an interplant shool] Novye metody otdelki gnutoi mebeli; po materialam mezhzavodskoi shkoly. Kiev, In-t tekhn. informatsii, 1964. 45 p. (MIRA 17:11)

KOTKO, M.N., red.

[Mechanization of finishing operations: from materials of factory training schools] Mekhanizatsiia otdelochnykh rabot; po materialam mezhzavodskoi shkoly. Kiev, 1963. 61 p. (MIRA 17:5)

1. Ukraine. Gosudarstvennyy komitet po koordinatsii nauchno-issledovatel'skikh rabot. Institut tekhnicheskoy informatsii.

KOTKO, I.K., kand.sel'skokhozyaystvennykh nauk

Controlled alteration of heredity in dual-purpose and spring barley
sown in summer and their transformation into winter crops.

Agrobiologiya no.1:34-38 Ja-P-69.

(MIRA 16:5)

1. Zernogradskaya gosudarstvennaya selektsionnaya stantsiya,
Rostovskaya oblast'.

(Barley)

(Heredity)

KOTKO, I.K., kand.sel'skokhozyaystvennykh nauk

Change of heredity in winter barley when planted in spring. Agro-
biologiya no.1:142-144 Ja-F '62. (MIRA 15:3)

1. Zernogradskaya gosudarstvennaya selektsionnaya stantsiya, g.
Zernovoy, Rostovskaya oblast'.
(Barley) (Heredity)

KOTKO, I. K.

KOTKO, I. K. - "The development and productivity of perennial grasses under irrigation in the southern Ukrainian SSR". Odessa, 1955. All-Union Order of Labor Red Banner Selection and Genetics Institute named after T. D. Lysenko. (Dissertation for the Degree of Candidate of Agricultural Science.)

SO: Knizhnaya Letopis', No. 43, 22 October 1955. Moscow

KOTKO, G.; KUDRYASHOV, N., inzh.; IVANOV, V., inzh.

Heading for the consolidation of automotive transportation units
and the organization of centralized transportation. Avt.transp.
42 no.3:32-33 Mr '64. (MIRA 17:4)

1. Starshiy ekonomist Talasskoy avtobacy, Kirgizskaya SSR (for
Kotko). 2. Avtokhozyaystvo No.16 Glavsrednevolzhskstroya (for
Kudryashov). 3. Tsentral'noye byuro tekhnicheskoy informatsii
Nizhne-Volzhskogo soveta narodnogo khozyaystva (for Ivanov).

~~L-39033-66~~ EWT(m)/T/EWP(+)/ETI LJP(c) JD
 ACC NR: AP6020977 (A) SOURCE CODE: UR/0113/66/000/003/0036/0038

AUTHOR: Kotkis, M. A.

ORG: Gor'kiy Automobile Plant (Gor'kovskiy Avtozavod)

TITLE: Strengthening automobile springs by the method of deformation aging

SOURCE: Avtomobil'naya promyshlennost', no. 3, 1966, 36-38

TOPIC TAGS: metallurgic research, metal aging, thermal aging, spring, spring steel, plastic deformation, automotive industry, crystal lattice, crystal dislocation

ABSTRACT: The author describes a method worked out at the Gor'kiy Automobile Plant for producing springs. Normalized rolled stock is subjected to cold plastic deformation with a 30-60% reduction by rolling or drawing. This sets the final dimensions of the cross section without intermediate annealing. Band or wire produced in this manner is used for producing either leaf of spiral springs. These are then heated for 20-30 minutes at 280-300°C. This process ensures good mechanical properties and work capacity of these parts. Theoretical analysis of experimental data accumulated in testing S-65A and 65G steel spring products produced by this method shows that these products are strengthened by deformation aging. This is explained as follows. The concentration of crystal lattice dislocations is increased by cold plastic deformation. Carbon and nitrogen in the solid solution move toward these dislocations and block them.

Card 1/2

UDC: 629.113:62-272.001.6

KOTKIS, M.A.

Introducing plastic thermal treatment of springs for the GAZ-51
motortruck. Biul. tekhn. ekon. inform. Gos. nauch.-issl. inst.
nauch. i tekhn. inform. 18 no.7:19-21 31 '65. (MERIA 18:9)

KOTKIS, M.A.

Effect of ultrasonic waves on the saturation with oil of porous ceramic metal bearings. Porosh. met. 4 no.6:96-97 N.D '64.
(MIRA 18:3)

1. Gor'kovskiy avtomobil'nyy zavod.

KOTKIS, M.A.

Experience in using an electron microscope at the Gorkiy
Automobile Factory. Zav.la. 28 no.1:119-120 '62.
(MIRA 15:2)

(Electron microscope)

26388

S/032/61/027/008/011/020
B103/B206

Investigation of the...

(1942); No. 9 (1948)). (1) Fracture surfaces of cyclic overload (number of cycles $N < 10^5$); (2) premature fatigue failures (number of cycles $10^5 < N < 10^6$); (3) fatigue failures (number of cycles $10^6 < N < (5 \div 10 \cdot 10^6)$). In the case of cyclic overloads, the rate of deformation of the metal is so high that no time remains for the separation of the metal along the gliding planes. In this case, the connections between them are destroyed in the form of imprints, with a characteristic, terrace-like fracture surface developing. In premature fatigue, metal fractures occur at lower tensions, and therefore lower rates of deformation than under cyclic overloads. This leads to partial cleavage and separation of the metal along the gliding planes. Consequently, characteristic "tongues" are formed. A complete cleavage of the metal along the gliding plane may occur in the range of fatigue failures due to even stronger reduction of the deformation rate. Gliding traces are then revealed on the fracture surfaces, or a system of intersecting lines, giving the structure a mosaic-like appearance; this structure develops due to plastic deformation of the metal. The methods proposed by the authors permit a determination of the range of tension where a fatigue failure occurs. There are 1 figure and 1 Soviet-bloc reference. [Abstracter's note: Essentially

Card 2/3

18.9100 (2808)

26388
S/032/61/027/008/011/020
B103/B206

AUTHORS: Kotkis, M. A., Sveshnikov, D. A., and Afanas'yeva, V. K.

TITLE: Investigation of the surface of fatigue failures by
electron microscope

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 8, 1961, 992

TEXT: The authors studied the surface structure of fatigue failures of brand-45 steel ($C = 0.49\%$, $Si = 0.17\%$, $Mn = 0.77\%$, $S = 0.035\%$, $P = 0.025\%$) under the electron microscope. The steel was in its normal state ($\sigma_B = 67 \text{ kg/mm}^2$, $\sigma_s = 35.8 \text{ kg/mm}^2$, $\delta = 22.4\%$, $\psi = 45.3\%$). The specimens had a length of 450 mm and a diameter of 80 mm. They had a 2 mm deep annular kerf with a radius $R = 4 \text{ mm}$. To produce replicas, rapon varnish (1% solution of celluloid in amyl acetate) was applied twice to the fracture surface close to the start of the fatigue destruction. The replicas were separated by means of gelatin and shaded by means of chromium. The microphotographs of the fracture surfaces were evaluated according to the classification by D. N. Vidman (Vestnik mashinostroyeniya, No. 2 - 4

Card 1/3

SYSUYEV, Yu.A.; KOTKIS, M.A.; AFANAS'YEVA, V.K.

Carbide transformations during the deformation and subsequent heating of plain carbon steels. Fiz. met. i metalloved. 12 no.4:513-518 0 '61. (MIRA 14:11)

1. Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut i Gor'kovskiy avtomobil'nyy zavod.
(Steel—Metallography)
(Phase rule and equilibrium)

APAYEV, B.A.; KOTKIS, M.A.

Volume changes of the carbide phase in tempering. Izv.vys.ucheb.zav.;
fiz. no.1:150-158 '61. (MIRA 14:7)

1. Fiziko-tekhnicheskiy institut pri Gor'kovskom gosudarstvennom
universitete imeni N.I.Lobachevskogo.
(Steel--Heat treatment) (Cementite)

Use of Small Magnifications in Connection With the SOV/32-25-5-35/56
Work With the Electron Microscope

austenite of the third phase showed that the latter is considerably less hard and obviously is a ferrite. There is 1 figure.

ASSOCIATION: Gor'kovskiy avtomobil'nyy zavod (Gor'kiy Automobile Plant)

Card 2/2

9 (7)

SOV/32-25-5-35/56

AUTHOR:

Kotkis, M. A.

TITLE:

Use of Small Magnifications in Connection With the Work With the Electron Microscope (Primeneniye malykh uvelicheniy pri rabote na elektronnom mikroskope)

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 5, p 616 (USSR)

ABSTRACT:

In connection with the investigation of the microstructure of heat-resistant chromium-nickel steels a three-phase structure was observed under the electron microscope EM-3, whereas only two phases were to be observed under the optical microscope. As a result, the sensitivity of these two microscopes was compared by magnifications of the order of magnitude 1000. Indentations with a diamond pyramid were made on the metal ground section by means of the device PMT-3 (loads 50.30 and 15 g) and examined under the metallographic microscope MIM-8 and the electron microscope. The photographs (Figs a,b) at the same magnification show that in the first case very indistinct images are obtained, whereas the electron microscope shows clearly three phases. The determination of the microhardness of

Card 1/2

KOTKIS, M.A.

AUTHOR	Kotkis, M.A. 32-8-35/61
TITLE	An Austenitometer with an Alternating Magnetic Field. (Austenitometr s peremennym magnitnym polem.)
PERIODICAL	Zavodskaya Laboratoriya, 1957, Vol 23, Nr 8, pp. 970-973 (USSR)
ABSTRACT	A magnetic method is recommended here for the examination of final austenite in tempered and sharpened sharp-cutting steel. The magnetic saturation in the entire volume is evaluated according to the degree (number) of ferromagnetic phases in the entire volume, i.e. according to magnetic induction. The chief disadvantage of almost all austenitometers is the necessity of a special graduation according to the form of the production object. The paper proposes a new construction of an austenitometer which removes this dependence on the form of the object. The chief principle of this construction is that the continuous magnetic field is replaced by an alternating field. Therefore this apparatus is called alternating-current austenitometer. It consists of: a switching contrivance and push-button keys, a solenoid, a brass coil, an indicator coil, a transformer, two potentiometers, two
CARD 1/2	
CARD 2/2	

Kotkis, M. A.

AUTHOR Kotkis M.A., 32-7-18/49
 TITLE The Induction Method for the Determination of the Depth of the Hardening Layer.
 (Induktsionnyy metod opredeleniya glubiny zakalennogo sloya, Russian)
 PERIODICAL Zavodskaya Laboratoriya, 1957, Vol 23, Nr 7, pp 819-821 (U.S.S.R.)
 ABSTRACT This method is based upon determination of the value $\beta = \frac{\Delta x}{\Delta e}$,
 where $\Delta x = B_c - B_x$ - difference between the induction of the not hardened preparation (B_e) and the hardened preparation with the unknown degree of hardness δ_x (B_e) and $\Delta e = B_c - B_e$ - difference of the inductions of the not hardened preparation (B_e) and the hardened standard preparation of the known degree of hardness $\delta_e(B_e)$; As $\beta = \frac{\delta x}{\delta e}$ are approximately equal, it is possible to set up a corresponding table for β' and β as well as to determine a diagram for the ratio $\beta = f(H)$. The ratio Δx is measured by a device consisting of four induction coils. Δe The object of the investigation was steel of the type 45f(H) = 0,94-0,95. There are 3 tables and 3 figures.
 ASSOCIATION Gor'kiy Automobile Factory im. V.M.Molotov.
 (Gor'kovskiy avtomobil'nyy zavod imeni V.M.Molotova).
 AVAILABLE Library of Congress.
 Card 1/1

SANDLER, N.I.; LEVIKOV, Ye.A.; KOTKIS, M.A.

Effect of arsenic admixtures on the acidity of steel and iron.
Fiz.met.1 metalloved. 1 no.3:523-528 '55. (MLRA 9:6)

1.Ukrainskiy nauchno-issledovatel'skiy institut metallov.
(Iron-arsenic alloys)

KOTKINA, S.I.

Health education in the Chinese People's Republic; based on data
from the Chinese journal "On hygiene." G1g. 1 san. 24 no.10:65-
67 '59.

(MIRA 13:1)

(HEALTH EDUCATION)
(PERIODICALS)

KOTKINA, M.G., Insh.

Increasing the loading capacity of gear transmissions.

Mashinostroenie no.3:11-13 My-Je '65.

(MIRA 18:6)

KOTKIN, V.S.

All-Union meeting of medical library personnel. Sov. zdrav. 19
no.11:87-89 '60. (MIRA 13:11)

(MEDICAL LIBRARIES)

SILIN, V.P.; KOTKIN, G.L.

Absorption of ultrasonic waves in superconductors. Fiz. met. i
metalloved. 14 no.3:456-457 S '62. (MIRA 15:9)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR.
(Superconductivity) (Ultrasonic waves)

On the absorption of ultrasonics ...

S/126/62/014/003/015/022
E073/E420

zones are of great interest from the point of view elucidating the roles of the electromagnetic field and of the deformation potential in the absorption of sound. The full expressions for the dielectric constant $\epsilon(\omega, k)$ and the coefficient of absorption γ are given for all the above cases. f

ASSOCIATION: FIAN

SUBMITTED: April 28, 1962

Card 2/2

41522

S/126/62/014/003/015/022
E073/E42024.2120
24.1700AUTHORS: Silin, V.P., Kotkin, G.L.

TITLE: On the absorption of ultrasonics in superconductors

PERIODICAL: Fizika metallov i metallovedeniye, v.14, no.3, 1962,
456-457

TEXT: During the propagation of ultrasonics in metals electromagnetic fields may be generated which have a significant influence on the absorption of ultrasonics. A consideration of the absorption of transverse ultrasonic waves in superconductors leads to the two cases of particular interest. Firstly, in the neighbourhood of the critical temperature in the "London" zone when $h\omega \ll \Delta \ll xT$, $hkv \ll \Delta$ the absorption coefficient differs appreciably from that for the normal metal if $\Delta \gtrsim xT/10$. Secondly in the "Pippard" zone there are two cases of interest: (a) when $h\omega \ll \Delta \ll xT \ll hkv$ the absorption is considerably lower than in a normal metal if $\Delta^2 \gtrsim h\omega xT$; (b) when $h\omega \ll xT \ll \Delta \ll hkv$ the absorption coefficient is considerably smaller than the corresponding coefficient due to the deformation potential. Experimental measurements of the parameters in these

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Theory of ultrasonic ...

26425
S/056/61/04./001/020/021
B102/B231

ASSOCIATION: Moskovskiy gosudarstvennyy universitet
(Moscow State University)

SUBMITTED: February 10, 1961

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26425

S/056/61/041/001/020/021

B102/B231

Theory of ultrasonic ...

$H > ck(m^*v_H)_{\max} \cos \theta/e$. In strong fields ($\Omega \gg kv$) the following is valid:

$$\begin{aligned}
 (A, B) = & (1 + \zeta_{AB}) 2\pi^2 (2\pi\hbar)^{-3} \int m^* dp_H \delta(k\tilde{v}) \tilde{A} \tilde{B} - \\
 & + (1 - \zeta_{AB}) 2\pi (2\pi\hbar)^{-2} i p \int m^* dp_H \frac{\tilde{A} \tilde{B}}{kv} + \\
 & + (1 - \zeta_{AB}) (2\pi\hbar)^{-3} i \int m^* dp_H \Omega^{-1} \int_0^{2\pi} d\varphi \int_0^{2\pi} d\varphi_1 \times \\
 & \times A(\varphi) B(\varphi_1) \left[\delta(k\tilde{v}) \int_0^{2\pi} kv(\varphi') d\varphi' - \sigma(\varphi - \varphi')/2 \right] + O((kv/\Omega)^2),
 \end{aligned} \quad (3.1),$$

where $\sigma(x) = \begin{cases} -1 & \text{if } x \text{ is less than } 0 \\ 1 & \text{if } x \text{ is greater than } 0 \end{cases}$. The author thanks V. P. Silin for his assistance. V. A. Gurevich is mentioned. There are 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc. The three references to English-language publications read as follows: A. B. Pippard, Phil. Mag. 2, 1147, 1957; Proc. Roy. Soc., A257, 165, 1960; T. Kjeldaa, Phys. Rev., 113, 1473, 1959.

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S/056/61/041/001/020/021
B102/B231

Theory of ultrasonic ...

where p_{Hn} is defined by the condition $\tilde{k}\tilde{v}(p_{Hn}) + n\Omega(p_{Hn}) = 0$. If $\xi_{AB} = 1$, (A, B) will be real; however, if $\xi_{AB} = -1$, (A, B) will be imaginary. In the following, the author studies the propagation of sound along the axis of symmetry in a longitudinal magnetic field, including the case where \tilde{k} and \tilde{H} are positioned in the symmetry plane of the Fermi surface. It is shown that in this case the sound absorption coefficient approaches zero in the approximation under consideration if the field exceeds a certain value at which $H = ck(m^*v_{H, \max}) \cos \theta/e$. z is assumed to be the axis of symmetry of the Fermi surface of s -th order; the symmetry axis of the crystal, and also the direction of sound propagation. If $\lambda \gg \delta$ (δ - thickness of the skin layer in case of an anomalous skin effect), then, if $H > H_1$, where $H_1 = ck(m^*v_{z, \max})/e$, a rotation of the polarization plane of sound through the angle $\chi = k^3 \delta \lambda_{xyz} / 2 \omega^2$ can be observed. χ is approximately equal to $Nmvk^2 / \beta \omega$, which agrees with the value obtained by K. B. Vlasov for free electrons. If $\lambda \ll \delta$, the absorption coefficient will be equal to $k \delta \omega'' / \omega = 2(L_x, L_x)_0^{-1}$ and approaches zero if

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Theory of ultrasonic ...

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Formulating $\lambda_{imjl}(\omega, \vec{k})$ in the way suggested by Silin, one obtains

$$\rho \omega^2 u_i = k_i k_m \lambda_{imjl} u_j$$

$$\lambda_{imjl} k_m k_l = \lambda_{imjl}^{(0)} k_m k_l + \delta \lambda_{imjl} k_m k_l, \quad (1.16)$$

$$\delta \lambda_{imjl} k_m k_l u_j = e N E_i - i e c^{-1} N \omega H_m u_j e_{ilm} - i k_m \int \Lambda_{lm} \delta f dp. \quad (1.17)$$

$$\begin{aligned} \delta \lambda_{imjl} k_m k_l = & -k_m k_l \langle \Lambda_{lm} \Lambda_{jl} \rangle - k_m k_l \langle l \rangle^{-1} (\langle \Lambda_{lm} \rangle - N \delta_{lm}) (\langle \Lambda_{jl} \rangle - N \delta_{jl}) + \\ & + i e c^{-1} N \omega H_m e_{ilm} - i \omega (L_i, L_j) - i \omega e^2 (N - i (L_i, v_a)) \bar{B}_{\alpha\beta}^{-1} (N \delta_{j\beta} - i (v_\beta, L_j)). \end{aligned} \quad (1.18)$$

(A, B) is given by

$$\begin{aligned} (A, B) = & \frac{2\pi^2}{(2\pi\hbar)^3} m^* \Omega^{-1} \sum_{|n| < (k v / \Omega)_{\max}} \left[(A_n^* B_n + \zeta_{AB} A_n B_n^*) \left| \frac{\partial}{\partial p_H} \frac{k v}{\Omega} \right|^{-1} \right]_{p_H n} - \\ & - \frac{2\pi i}{(2\pi\hbar)^3} P \int m^* dp_H \Omega^{-1} \sum_{n=-\infty}^{\infty} \frac{A_n^* B_n - \zeta_{AB} A_n B_n^*}{k v / \Omega + n}, \end{aligned} \quad (1.23)$$

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Theory of ultrasonic ...

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if $kvcos\theta$ is much greater than ν , where ν denotes the collision frequency of electrons, and θ the angle between \vec{k} and \vec{H} . In addition, the defining equations

$$-\int dp A \partial f_0 / \partial \epsilon = \langle A \rangle, \quad (1.6)$$

$$(2\pi)^{-1} \int_0^{2\pi} A(\varphi) d\varphi = \bar{A},$$

$$\left\langle \frac{A \Omega^{-1} \int_{\varphi}^{\varphi+2\pi} d\varphi_1 B(\varphi_1) \exp(ik \int_{\varphi}^{\varphi_1} \nu(\varphi') d\varphi' / \Omega)}{\exp 2\pi i k \tilde{\nu} / \Omega - 1} \right\rangle = (A, B). \quad (1.8)$$

are introduced. The lattice vibrations are given by

$$\rho u_i = \lambda_{imjl}^{(0)} \frac{\partial u_j}{\partial x_m \partial x_l} - eNE_i - i \frac{e}{c} N \omega [\vec{u} \vec{H}]_i + \frac{\partial}{\partial x_m} \left(\Lambda_{im} f \right) \frac{\partial}{\partial p}. \quad N \text{ stands for the number of electrons per unit volume, } \rho \text{ for the density of matter, and } \lambda_{imjl}^{(0)} \text{ for the tensor of the moduli of elasticity of the lattice.}$$

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Theory of ultrasonic ...

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B102/B231

$\xi = \xi_0 + \Lambda_{1k} \partial u_1 / \partial x_k$; the electron-distribution function is taken as

$$\frac{\partial f}{\partial t} + v \frac{\partial f}{\partial r} + \left(eE + \frac{e}{c} [vH] - \frac{\partial}{\partial r} \Lambda_{1k} \frac{\partial u_1}{\partial x_k} \right) \frac{\partial f}{\partial p} = 0. \quad (1.1).$$

$u \sim \exp i(\vec{k}\vec{r} - \omega t)$. Applying the variables introduced by I. M. Lifshits, M. Ya. Azbel', and M. I. Kaganov (ZhETF, 31, 63, 1956), the following is obtained for the addition f to the equilibrium-distribution function, taking into account that δf is periodic (period φ):

$$\delta f = \frac{(i u_1 k_m \Lambda_{1m} + i e k^{-2} k E) \partial f_0 / \partial s - \Omega^{-1} \int_0^{2\pi} d\varphi_1 [e E_\alpha v_\alpha(\varphi_1) \partial f_0 / \partial s - i \omega \delta f(\varphi_1)] \exp(i k \int_0^{\varphi_1} v(\varphi') d\varphi' / \Omega)}{\exp(i k \int_0^{2\pi} v(\varphi) d\varphi / \Omega) - 1} \quad (1.3).$$

v_α is the velocity component perpendicular to \vec{k} . This formula is applicable

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26125
S/056/61/041/001/020/021
B102/B231

247400 (1160, 1144, 1395, 1482)

AUTHOR: Kotkin, G. L.

TITLE: Theory of ultrasonic absorption by metals in a magnetic field

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 1(7), 1961, 281 - 287

TEXT: It is known that investigations of low-temperatures ultrasonic absorption permit to draw various conclusions as to the Fermi surface. If $l \gg \lambda$ (l - mean free path of electrons, λ - shock-wave length), there is no interrelation between the energy transfer from the lattice to the electrons and the electron collisions. The theory of sound absorption with regard to this case ($H = 0$) has been developed by V. P. Silin (ZhETF, 38, 977, 1960). In the present work, the complex modulus of elasticity is computed for the case $l \gg \lambda$, the case of an infinite l being considered as well. It is moreover assumed that a magnetic field exists, and that the Fermi surface is closed. At first, a few formulas are derived, which are of importance for further investigations. The change of the electron energy with a lattice deformation (u displacement vector) is assumed to be

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On the Absorption of Ultrasonics in Metals

SOV/56-36-3-55/71

an ansatz is made for the equation of motion and the electromagnetic field equations, and a solution is derived. Finally, the special case of a polarized sonic field that is parallel to \vec{H} is investigated, as well as the case of a vertically polarized sonic field. From the derived formulae it follows that $\gamma(H)$ has a number of maxima. The author finally thanks V. P. Silin for supervising work. There are 6 references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: November 22, 1958

Card 2/2

24(1)

SOV/56-36-3-55/71

AUTHOR:

Kotkin, G. L.

TITLE:

On the Absorption of Ultrasonics in Metals (O pogloshchenii
ul'trazvuka v metallakh)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
Vol 36, Nr 3, pp 941 - 942 (USSR)

ABSTRACT:

The absorption of ultrasonics in metals at low temperatures is the consequence of an electron-lattice interaction. In the present paper ("Letter to the Editor") the author theoretically investigates the absorption of transverse sound by metals in a transverse magnetic field. In the introduction several papers by western authors are discussed in short. The author considers the motion of lattice atoms as given and the electrons as free; he investigates the case in which $l \geq \lambda$, $R \sim \lambda$. (λ - wave length of sound, l - free path, $R = mv_c/eH$ - radius of electron orbit). In this case equilibrium occurs in the case of the same distribution of f_0 - electrons as without a sonic field. For an electron distribution $f = f_0 - \lambda (\partial f_0 / \partial \mathbf{E})$ and the electric field \vec{E}

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ACCESSION NR: AP4001834

the amplifier track, which is considered to be a function of input impedance, input capacity, noise level, and amplifying coefficient of the amplifier. The latter is set at a limit of 4 to 8×10^5 . Finally, the monitor includes a zero shift stabilizer with better than 10% accuracy and dead time limit of 200 to 1000 μ sec and a recorder of type STA-2M or LTA-57. Orig. art. has: 3 figures.

ASSOCIATION: Polyarny* geofizicheskiy institut, Kol'skogo filiala AN SSSR
(Institute of Polar Geophysics Kola Department AN SSSR)

SUBMITTED: 22Feb63

DATE ACQ: 17Dec63

ENCL: 00

SUB CODE: AS

NO REF SOV: 005

OTHER: 001

Card 2/2

ACCESSION NR: AP4001834

S/0203/63/003/006/1108/1114

AUTHORS: Kapustin, I. N.; Kotkin, B. A.; Smirnov, V. S. Frantsuz, E. T.

TITLE: Some considerations of the design and plan of a neutron monitor

SOURCE: Geomagnetizm i aeronomiya, v. 3, no. 6, 1963, 1108-1114

TOPIC TAGS: neutron monitor, cosmic ray nucleon component, cosmic ray intensity variation, neutron monitor construction, nuclear physics, neutron counter, neutron monitor parameters, neutron detector, cosmic ray neutron, neutron energy spectrum, gas stabilatron, neutron monitor voltage standard, cosmic ray intensity, cosmic ray counter, cosmic radiation, nuclear particle

ABSTRACT: The basic parameters for a neutron monitor for measuring cosmic rays have been discussed and their individual accuracies evaluated. These entail first the change in the sensitivity of the detector defined by $A = \sum M_k a_k$, where a_k - counter sensitivity in the k-th pocket cross section, M_k - sensitivity of this pocket relative to cosmic rays, given within an accuracy of 1%. Second, a voltage regulator suitable for 2000-volt applications for which a gaseous stabilizer is considered with an accuracy of 0.05%. Thirdly, the transmission coefficient of

Card 1/2

FOMENKO, T.G.; FOGARTSEVA, Ye.M.; KOTKIN, A.M.; BUTOVETSKIY, V.S.

Selecting the **systems** for the purification of contaminated water.
Koks i khim. no.7:17-22 '65. (MIRA 18:8)

1. Ukrainskiy proyektno-konstruktorskiy i nauchno-issledovatel'skiy
institut po obogashcheniyu i briketirovaniyu ugley.

KOTKIN, A.M., kand. tekhn. nauk

Concerning the book "Increasing the supply of coking coal."
Ugol' Ukr. 7 no.7:54-55 J1 '63. (MIRA 16:8)

(Coke industry)

KOTKIN, A.M.; ROZHNOVA, Ye.Ye.

Flotation of slurry coagulated with polyacrylamides. Koks i
khim. no.12:3-7 '62. (MIRA 16:1)

1. Ukrainskiy proyektno-konstruktorskiy i nauchno-issledovatel'-
skiy institut po obogashcheniyu i briketirovaniyu ugley.
(Donets Basin--Flotation) (Acrylamides)

KOTKIN, A.M., kand.tekhn.nauk; SAMYLIN, N.A.

Systems of payment for the quality of concentrates and industrial products. Koks i khim. no.10:51-55 '62. (MIRA 16:9)

1. Ukrainskiy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut po obogashcheniyu i briketirovaniyu ugley.
(Coal preparation plants) (Coal--Prices)

SHPAKHLER, A.G.; KORCHAGIN, L.V.; LEVIN, S.T.; BLAGOV, I.S.; KOTKIN, A.M.;
SOLOV'YEV, A.V.

Briquetting coal and anthracite breeze in a cold state. Ugol'. prom.
no.6:34-36 N-D '62. (MIRA 16:2)

1. Dnepropetrovskiy gornyy institut (for Shpakhler, Korchagin, Levin).
2. Ukrainskiy proyektno-konstruktorskiy i nauchno-issledovatel'skiy
institut po obogashcheniyu i briketirovaniyu ugley (for Blagov, Kotkin,
Solov'yev).

(Briquets (Fuel))

SHPAHLER, A.G.; AKSEL'ROD, E.I.; KOTKIN, A.M.; SOLOV'YEV, A.V.; ZEL'DIN, B.B.

Improving the manufacture technology in coal briquet plants.
Ugol' Ukr. 6 no.2:17-19 F '62. (MIRA 15:2)

1. Dnepropetrovskiy gornyy institut (for Shpakhler, Aksel'rod).
2. UkrNIIUgleobogashcheniye (for Kotkin, Solov'yev). 3.
- Donetskhiproshakht (for Zel'din).
(Briquets (Fuel))

FOMENKO, Timofey Grigor'yevich; BLAGOV, Igor' Sil'vestrovich; ~~KOTKIN,~~
Aleksandr Matveyevich; KUNIK, V.P., red.izd-va; LOMILINA, L.N.,
tekhn. red.

[Slime flocculation] Flokuliatsiia shlamov. Moskva, Gos.
nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1962. 109 p.
(MIRA 15:3)

(Flotation)

KOTKIN, A. M., Cand. Techn. Sci. (diss) "Investigation of Operating Environment of Coal-Enriching Plants," Khar'kov, 1961, 27 pp. (Khar'kov Mining Inst.) 200 copies (KL Supp 12-61, 268).

ARONOV, Samuil Grigor'yevich; BAUTIN, Ivan Grigor'yevich; VOLKOVA, Zoya Andreyevna; VOLOSHIN, Arkhip Il'ich; VIROZUB, Yevgeniy Vladimirovich; GABAY, Lev Izrailevich, DIDENKO, Viktor Yefimovich; ZASHKVARA, Vasil'y Grigor'yevich; IVANOV, Pavel Aleksandrovich, KUSTOV, Boris Iosifovich [deceased]; KOTOV, Ivan Konstantinovich; ~~KOTKIN~~, Aleksandr Matveyevich; KOMANOVSKIY, Maksim Semenovich; LEYTES, Viktor Abramovich, MOROZ, Mikhail Yakovlevich; NIKOLAYEV, Dmitriy Dmitriyevich, OBUKHOVSKIY Yakov Mironovich; RODSHEYN, Pavel Moiseyevich; SAPOZHNIKOV, Yakov Yudovich, SENICHENKO, Sergey Yefimovich; TOPORKOV, Vasil'y Yakovlevich; CHERMNYKH Mikhail Sergeyevich; CHERKASSKAYA, Esfir' Ionovna, SHVARTS, Semen Aronovich; SHERMAN, Mikhail Yakovlevich; SHVARTS, Grigoriy Aleksandrovich; LIBERMAN, S.S., redaktor izdatel'stva; ANDREYEV, S.P., tekhnicheskiy redaktor

[Producing blast furnace coke of uniform quality; a collection of articles for the dissemination of advanced practices] Poluchenie domennogo koksa postoiannogo kachestva; sbornik statei po obmenu peredovym opytom. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 300 p. (MLRA 9:8)
(Coke industry)

KOTKIN, A.M.

VODNEV, G.G.; SHELKOV, A.K.; DIDENKO, V.Ye.; FILIPPOV, B.S.; TSAREV, M.H.;
 ZASHVARA, V.G.; LITVINENKO, M.S.; MEDVEDEV, K.P.; MOLODTSOV, I.G.;
 LGALOV, K.I.; RUBIN, P.G.; SAPOZHNIKOV, L.M.; TYUTYUNNIKOV, G.N.;
 DMITRIYEV, M.M.; LEYTES, V.A.; LERNER, B.Z.; MEDVEDEV, S.M.; REVIKIN,
 A.A.; TAYCHER, M.M.; TSOGLIN, M.E.; DVORIN, S.S.; RAK, A.I.; OBUKHOV-
 SKIY, Ya.M.; KOTKIN, A.M.; ARONOV, S.G.; VOLOSHIN, A.I.; VIROZUB, Ye.V.;
 SHVARTS, S.A.; GINSBURG, Ya.Ye.; KOLYANDR, L.Ya.; BELETSKAYA, A.F.;
 KUSHNEREVICH, N.R.; BRODOVICH, A.I.; NOSALEVICH, I.M.; SHTROMBERG, B.I.;
 MIROSHNICHENKO, A.M.; KOPELIOVICH, V.M.; TOPORKOV, V.Ya.; AFONIN, K.B.;
 GOFTMAN, M.V.; SEMENENKO, D.P.; IVANOV, Ye.B.; PEYSAKHZON, I.B.;
 KULAKOV, N.K.; IZRAELIT, E.M.; KVASHA, A.S.; KAPTAN, S.I.; CHERMNYKH,
 M.S.; SHAPIRO, A.I.; KHALABUZAR', G.S.; SEKT, P.Ye.; GABAY, L.I.;
 SMUL'SON, A.S.

Boris Iosifovich Kustov; obituary. Koks i khim. no.2:64 '55.(MLRA 9:3)
 (Kustov, Boris Iosifovich, 1910-1955)

KOTKIN, A.M.; OBUKHOVSKIY, Ya.M.; LEVITSKIY, Ya.B., redaktor; RYKOV,
N.A., redaktor; KOROVENKOVA, Z.A., tekhnicheskij redaktor

[Standardizing the quality of coal for coking] Usrednenie
kachestva uglei dlia koksovaniia. Moskva, Ugletekhizdat, 1955.
78 p. (Coke) (MLRA 8:10)

KOTKIN, A.M., inzhener; OBUKHOVSKIY, Ya.M., glavnyy inzhener kandidat
tekhnicheskikh nauk.

Preliminary sampling of coking coal. Standartizatsiia no.2:35-40 Mr-Ap '54.
(MLRA 7:6)

1. Nachal'nik inspektzii "Yuzhinskoksugol'" (for Kotkin).
(Coal--Analysis)

KOTKIN A.M.

KOTKIN, A.M.; OBUKHOVSKIY, Ya.M.; LAZAREV, N.N., redaktor; SHAROPIN, V.D.,
redaktor; PETROVA, N.S., tekhnicheskii redaktor

[Goals for coking and control of their quality] Ugli dlia koksovaniia
i kontrol' ikh kachestva. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry
po chernoi i tsvetnoi metallurgii, 1954. 228 p. (MLRA 7:9)
(Coal) (Coke)

KOTKIN, A.M.; OBUKHOVSKIY, Ya.M.; SHVARTZ, S.A., redaktor; ANDREYEV, S.P.,
tekhnicheskiy redaktor.

[Manual for inspectors of the quality of coal for coking] Pamiatka
inspektora po kachestvu uglei dlia koksovaniia. Khar'kov, Gos. nauch-
no-tekhn. izd-vo lit-ry po chernoii i tsvetnoi metallurgii, 1954.

190 p.

(MLRA 8:1)

(Coal) (Coke)

BLAGOV, I.S.; KOTKIN, A.M.; SHPAKHLER, A.G.; KEL'DIN, B.B.

Briquetting of coal fines by using heavy coal-tar for binder. Ugol' 28
no.8:40-42 Ag '53. (MLRA 6:7)

1. Trest Ugleobogasheniye (for Blagov). 2. Yuzhnaya inspektsiya Glav-
- koksa (for Kotkin). 3. Dnepropetrovskiy gornyy institut (for Shpakhler).
4. Mospinskiy briketnyy kombinat (for Zel'din). (Briquets (Fuel))

SHMAGIN, Ya.G.; SIPOVSKIY, G.V.; KOTKAS, R.E.

Water extraction of diatomic phenols from distillate fractions of
shale tars. Khim. i tekhn. gor. slan. i prod. ikh perer. no.11:
236-245 '62. (MIRA 17:3)

AAMISEPP, I.; EICHENBAUM, E.; HALLER, E.; KAARLI, K.; KIIK, H.;
KIVI, V.; KOTKAS, H.; KORJUS, H.; LEIVATEGIJA, L.; LIIV, J.;
LÄNTS, L.; MÄLKSOO, A.; PEDAJA, V.; POLNA, H.; RANDALU, I.;
RUUGE, J.; SEKSEL, H.; TOOMRE, R.; TUPITS, H.; TUUL, S.;
TÖNISSON, H.; TÄÄGER, A.; VIIRAND, M.; VAHENÕMM, K.; ARAK, A.,
red.

[Plant breeding] Taimekasvatus. Tallinn, Eesti Raamat, 1964.
813 p. [In Estonian] (MIRA 18:1)

KOTKAS, E.M.

Drilling method for making drainage ditches in oil shale mines
and pits. Khim. i tekhn. gor. slan. i prod. ikh perer. no.9:
52-68 '60. (MIRA 15:6)
(Estonia--Oil shales) (Mine drainage)

KOTKAS, E. M.

PA 7/49T83

USSR/Mining Machinery
Mining Methods

Jul 48

"Special Mining Equipment and New Methods of Mining
Are Necessary at the Baltic Shale Mines," E. M.
Kotkas, Cand Tech Sci, 4 pp

"Ugol'" No 7 (268)

This ore is the most important in the USSR regarding
production and processing of shale oil. Practically
all haulage was done by men and horses in bourgeois
Estonia. Leningradshaktoproyekt Trust introduced
coal mine type mechanization systems. This, how-
ever is unsuitable for shale workings.

7/49T83

BUCINA, Ivan; JASANOVSKY, Pavel; KOTKA, Ladislav; MARSAL, Jaroslav

Determination of the absolute activity of some radioactive isotopes, suitable for neutron flux measurement. Jaderna energie 9 no.8:265 Ag '63.

1. Ustav pro vyakum, vyrobu a vyuziti radioizotopu, Praha.

KOTJELNIKOV, Ksenija, dr.; TOMIC, Vlado, dr.

Pathological contribution to otitis media. Med. arh. 17 no.6:
87-91 N-D '63.

1. Otorinolaringoloska klinika Medicinskog fakulteta u Sarajevu
(Sef: Prof. dr Josip Gero).

L 15641-66

ACC NR: AT5027917

in its content of Al_2O_3 . Thus the purpose of the nodulization of powder lies not only in increasing its pour weight but also in reducing its additional oxidation during hot degassing or hot briquetting. From the standpoint of additional oxidation during heating, the presence of finer fractions in the nodulized powder is undesirable. The currently produced nodulized powder contains a large proportion of finer particles and briquetting of such powder in heated state or the high-temperature sintering of cold-pressed briquets will inevitably augment the nonuniformity of distribution of the oxide phase. Orig. art. has: 6 figures.

SUB CODE: 11, 13 / SUBM DATE: none/ ORIG REF: 009/ OTH REF: 003

BC
Card

3/3

L 15641-66

ACC NR: AT5027917

and the amount of Al metal fails to take into account the possible changes in the composition of the oxide phase due to the hydration of Al_2O_3 and the decomposition of hydrated crystals. Kotiyeva's method is based on determining the content of Al metal by the customary gas-volumetric method and then titrating the solution with H_2SO_4 in order to determine the total amount of Al in the suspension. The difference between the total amount of Al and Al metal reveals the amount of Al bound in oxygen compounds. The amount of Al_2O_3 is then determined by calculating the bound Al in terms of Al_2O_3 . On this basis it is established that, given the current conditions of the production and storage of Al powder, its oxide phase is represented by $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$. In the SAP obtained by sintering and pressworking at $450^\circ\text{--}500^\circ\text{C}$ the oxide phase is represented by monohydrate of Al_2O_3 ($\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$). If the powder or SAP is heated above 550°C , its oxide phase does not contain chemically bound hydrated-crystal moisture ($\gamma\text{-Al}_2\text{O}_3$). The formation of $\gamma\text{-Al}_2\text{O}_3$ is not, however, tantamount to the complete degassing of the material: $\gamma\text{-Al}_2\text{O}_3$ is highly hygroscopic and can absorb moisture chemically, which accounts for the presence of considerable quantities of moisture in the residue. The vacuum heating of cold-pressed briquets at the rate of 50°C/hr results in the cessation of gas release only at $670\text{--}680^\circ\text{C}$. In view of the change in the composition (and hence also density) of the oxide phase during heating, the increase in its gravimetric content may be accompanied by a decrease in volumetric content. Further, prior heating in an oxidizing atmosphere for degassing purposes is allowable only in the case of properly nodulized powder; heating of non-nodulized powder leads to rapid increase

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L 15491-66 EWT(1)/ENP(a)/EWT(a)/ENP(t)/ENI(k)/ENP(b)/ENP(b) IJP(e) JD

ACC NR: AT5027917

SOURCE CODE: UR/2536/65/000/062/0030/0037

AUTHOR: Paisov, A. I. (Candidate of technical sciences); Kolpa shnikov, A. I. (Doctor of technical sciences, Professor); Kotiyeva, L. U. (Candidate of chemical sciences); Serbinovskaya, Ye. L. (Engineer); Shelamov, V. A. (Candidate of technical sciences)

ORG: Moscow Aviation Technology Institute (Moskovskiy aviatsionnyy tekhnologicheskii institut)

TITLE: Transformations occurring in aluminum powder during its heating

SOURCE: Moscow, Aviatsionnyy tekhnologicheskii institut. Trudy, no. 62, 1965. Obrabotka davleniyem legkikh splavov (Pressure working of light alloys), 30-37

TOPIC TAGS: aluminum powder, powder metal production, heating, aluminum oxide, phase composition, metal heat treatment

ABSTRACT: The investigation of the changes in the amount and composition of the oxide phase in heated Al powder is of great interest to the heating of this powder or to its briquetting in heated state, as well as to the heating of cold-pressed briquets to temperatures of 600°C and higher, performed for the purposes of degassing and sintering. The authors performed this investigation on the basis of a method proposed by L. U. Kotiyeva, since the conventional method of determining Al_2O_3 in Al powder and in sintered Al powder (SAP) according to the difference between the weight of sample

Card 1/3

UDC: 669.017:669.7.017.3

KOSIZOVA, I.M.; IAYNEE, A.I.; KOLENKOVA, M.A.

New method of preparing return solutions for the leaching of
nepheline sinters. Izv. vys. ucheb. zav.; tsvet. met. 8
no.3:58-64 '65. (MIRA 18:9)

1. Moskovskiy institut stali i splavov, kafedra radioaktivnykh
metallov i kompleksnoy pererabotki polimetallicheskogo syr'ya.

LAYNER, A.I.; KOLENKOVA, M.A.; KOTIYEVA, L.U.

Effect of the silicon module of the initial solution, the depth of decomposition and seeding, on the quality of the aluminum hydroxide during calcination. Izv. vys. ucheb. zav.; tsvet. met. 7 no. 4:101-106 '64 (MIRA 19:1)

1. Moskovskiy institut stali i splavov, kafedra radioaktivnykh metallov i kompleksnoy pererabotki polimetallicheskogo syr'ya.

LAYNER, A.I.; KOTIYEVA, L.U.

Laboratory and pilot plant investigations on desiliconizing aluminate solutions at atmospheric pressure and with large amounts of white mud. TSvet. met. 36 no.8:57-62 Ag '63. (MIRA 16:9)
(Aluminum--Metallurgy)

LAYNER, A. I.; KOLENKOVA, M. A.; KOTIYEVA, L. U.

White mud as an activating additive in the desiliconization of
aluminate solutions. TSvet. met. 35 no.10:50-55 0 '62.
(MIRA 15:10)

(Alumina) (Leaching)

LAYNER, A.I.; KOTIYEVA, L.U.

Effect of specific surface and the activity of white slime
on the desiliconizing of aluminate solutions. Izv. vys. ucheb.
zav.; tsvet. met. 5 no.6:71-76 '62. (MIRA 16:6)

1. Moskovskiy institut stali i splavov, kafedra metallurgii
i fizicheskoy khimii tsvetnykh metallov.
(Aluminum--Metallurgy)
(Hydrometallurgy)

KOTIYEVA, L.U.; LAYNER, A.I.

Obtaining aluminate solutions with a high ratio of silicon in
autoclave desiliconizing. Izv. vys. ucheb. zav.; tsvet. met. 5
no.4:113-116 '62. (MIRA 16:5)

1. Moskovskiy institut stali, kafedra metallurgii legkikh metallov.
(Alumina) (Autoclaves)

Professor G. A. Sisoyan. On His 60-th Birthday

SOV/105-59-6-26/28

of an ore-annealing furnace. In 1954 he published a monograph on the burning of large arcs. At present he is engaged in studying the electromagnetic field distribution in ore annealing units, the theory of large-scale arcs and the control of arcs in furnaces. He also published a number of articles on problems of electrothermal processes in the periodicals "Stal'" and "Elektrichestvo". He has been awarded the "Medal of Distinction". There is 1 figure.

Card 2/2

8 (0)

AUTHORS: Gabashvili, N. V., Ter-Khachaturov, A. Ya., SOV/105-59-6-26/28
Kotiya, A. K., Svenchanskiy, A. D., Netushil, A. V.,
Filippov, K. M., Petnev, L. N. and Others

TITLE: Professor G. A. Sisoyan (Professor G. A. Sisoyan)
On His 60-th Birthday (K 60-letiyu so dnya rozhdeniya)

PERIODICAL: Elektrichestvo, 1959, Nr 6 p 94 (USSR)

ABSTRACT: Grigoriy Artem'yevich Sisoyan began his scientific career at the Vsesoyuznyy elektrotekhnicheskiy institut (All-Union Institute of Electrical Engineering). From 1932 he works as a scientist and as a teacher at the Chair of General and Theoretical Electrical Engineering at the Gruzinskiy politekhnicheskiy institut im. Kirova (Georgian Polytechnic Institute imeni Kirov). At the same time he works as an engineer at the Gruzenergo. From 1937 he devoted himself to electrothermal processes and theoretical electrical engineering. He solved a number of problems connected with the processes occurring in the electrical part of large ferro-alloy and carbide furnaces. In 1946 he was promoted Doctor of Technical Sciences. His Dissertation dealt with the electrical phenomena in the bath

Card 1/2

^U
KOTIYA, A. K.

Kotia, A. K. - "Resonance curves in a star-connected three-phase symmetrical system, when the active resistance of one phase of the receiver is a variable quantity," (In index: A. K. Kotiya), Trudy Energet. in-ta (Akad. nauk Gruz. SSR), Vol. IV, 1948, p. 151-55 (In Georgian, resume in Russian)

SO: U-4934, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).

0924 1664

ACC NR: AP7008868

SOURCE CODE: UR/0105/66/000/008/0095/0095

AUTHOR: Abelishvili, L. G.; Al'tgauzen, A. P.; Baycher, M. Yu.; Gabashvili, N. V.; Dididze, M. S.; Yefroymovich, Yu. Ye.; Kotiya, A. K.; Kupradze, G. D.; Kurdiani, I. S.; Notushil, A. V.; Nikol'skiy, L. Ye.; Razmadze, Sh. M.; Svonchanskiy, A. D.; Smelyanskiy, M. Ya.; Tkeshelashvili, G. K.

ORG: none

TITLE: Professor Grigoriy Artemyevich Sisoyan (on his 70th birthday)

SOURCE: Elektrichestvo, no. 8, 1966, 95

TOPIC TAGS: electric engineering personnel, electric furnace, academic personnel

SUB CODE: 09

ABSTRACT: G. A. Sisoyan graduated from the Moscow Power Engineering Institute in 1931. In 1932 he went to work at the Georgian Polytechnical Institute in the theoretical and general electrical engineering department. Sisoyan has worked and published many works in the area of electric furnaces. He has also worked in the area of investigation of electric spark action. He has published over 50 scientific works. He has also been active in university level teaching. Orig. art. has: 1 figure. [JPRS: 38,330]

UDC: 621.36

Card 1/1

KOTII, O.A. (Yaroslavl')

G. Shteingaus' "sports problem". Mat v shkole no.3:90-92
My--Ja '63. (MIRA 16:7)

(Mathematics---Problems, exercises, etc.)

KOTIY, O.A.

Construction and representation of algebraic space curves by means
of two Cremona bundles of straight lines. Dokl. na nauch. konf. 1
no.3:89-93 '62. (MIRA 16:8)
(Curves, Algebraic) (Cremona transformations)

KOTLY, O.A.

Use of birational transformations in congruences for the formation
of space curves. Dokl. na nauch. konf. 1 no.3:85-88 '62.
(MIRA 16:8)

(Cremona transformations) (Curves, Algebraic)

ISAKOV, A.A. (Kemerovskaya oblast'); ZHURGARAYEV, Amangel'dy (Dzhambul'skaya obl., KazSSR); VLADIMIROV, A. (Asbest); FRIMAN, L.I. (Yaroslavl'); KILIMNIK, Ya.Ye. (Vinnitsa); TEREKHOV, I.A. (Skopin); AKDAULETOV, N.A. (pos.Mertuk. KazSSR); ZAKHARKIN, V.Ye. (pos.Rudtsev, Tul'skaya oblast'); SHESTOPAL, G.A. (Moskva); KOTIY, O.A. (Yaroslavl'); GAUKHMAN, V.A. (Moskva); LOPSHITS, A.M. (Yaroslavl'); SERGUSHOV, S.A. (Yaroslavl'); GOTMAN, E.G. (Pechora); VETROV, K.V. (Putintsevo, Vostochno-Kazakhstanskoy obl.); MIKHELEVICH, Sh.Kh. (Daugavpils); SKOPETS, Z.A. (Yaroslavl'); RYBKOV, L.M. (Yaroslavl'); CHEGODAYEV, A.I. (Gavrilov-Yam)

Problems. Mat.v shkole no.6:85-92 N-D '62. (MIRA 16:1)
(Mathematics--Problems, Exercises, etc.)

КОЛИ, С.А. (Yaroslav1')

Generalization of isotropic and isopropal correspondences. *Mat. zap.*
no. 161-169 '59. (MIA 12:11)
(Geometry)

POTAPOV, V.G. (Khabarovsk); ZHAROV, V.A. (Yaroslavl'); KOTIY, O.A.
(Yaroslavl'); NEKRASOVA, (Ussuriysk); ASEKRITOV, U.M. (Yakutsk)

Selected problems and special methods for their solution. Mat.
v shkole no.5:87-88 S-0 '63. (MIRA 16:11)

Kotly, O.A.

16(1)

PHASE I BOOK EXPLOITATION SOV/2508

Matematicheskoye predstavleniye; matematika, nye predstavleniya, prirochnaya i shkola, yep. (Mathematical Education; Mathematics in the Classroom; Application and History, Mr.) Moscow, Gostekhizdat, 1959. 15,000 copies printed.

Ed.: I.M. Kronshteyn; Editorial Board of Series: I.M. Kronshteyn, A.I. Markushovich, I.M. Yaglom; Tech. Ed.: S.M. Akhlsimov.

PURPOSE: This book is intended for persons without an extensive mathematical education who are interested in trends in contemporary mathematics. The book may be useful to high school mathematics teachers.

COVERAGE: The book consists of articles, reviews, and scientific and methodological reports, some of which are translations from other languages. The state of modern mathematics is covered, including applications, history teaching of mathematics in schools, and mathematical developments in the USSR and abroad. One section deals with scientific and pedagogical life in the USSR and another contains reviews of certain mathematical publications. Some mathematical background is necessary to understand the book; certain articles require a knowledge of higher mathematics.

Mathematical Education; (Cont.)

SOV/2508

2. On the Role of Mathematics in Secondary Education 152
(Iyagunov, A.A.)

II. SCIENTIFIC REPORTS

Kogan, E.M. On the Evaluation of the Remainders of a Series With Recurrent Coefficients 155

Kotly, O.A. Generalization of the Isotomic and Isogonal Correspondences 161

Kopp, V.G. On One Type of Circular Homogram 171

Brief Reports: V.A. One Characteristic Property of an Isosceles Triangle 175

2. Melnikov, I.G. One Generalization of Eisenstein's Criterion 177

Card 4/8

AUTHOR: Kotiy, O.A. 30V/140-58-6-15/27

TITLE: Classification of the Cremona-Transformations T_2 and Algebraic Line Congruences (Klassifikatsiya kremonovykh preobrazovaniy T_2 i algebraicheskiye kongruentsii pryamykh)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1958, Nr 6, pp 156-160 (USSR)

ABSTRACT: Every Cremona-transformation has one double and four simple fundamental points. By spatial construction the author obtains 12 types of Cremona-transformations which appear by the fact that some or all fundamental points coincide. Five of the given types are already investigated by Skopets [Ref 2]. The author's spatial construction bases on the realization of a Cremona-transformation with the aid of the well-known line congruence of first order and second class. There is 1 figure and 3 references, 1 of which is Soviet, 1 English, and 1 German

ASSOCIATION: Yaroslavskiy pedagogicheskiy institut imeni K.D.Ushinskogo (Yaroslavl' Pedagogical Institute imeni K.D.Ushinskiy)

SUBMITTED: February 20, 1958

Card 1/1

KOTULA, Zbigniew; KOTIUSZKO, Danuta

Studies on the pigments present in neomycin eluates. Med. dosw.
mikrobiol. 17 no.2:163-172 '65.

1. Z Instytutu Antybiotyków w Warszawie.

KOTIUSZKO, Danuta; LUBINSKI, Olgierd; RUCZAJ, Zbigniew; RUSZCZYNSKI, Jan;
~~SOPINOWSKI, Wojciech~~

Preparation of tetracycline (achromycis) by sub-surface fermentation of
Streptomyces aureofaciens. Med. dosw. mikrob. 10 no.2:153-164 1958.

1. Z Zakladu Mikrobiologii i Zakladu Technologii Instytutu Antybiotykow
w Warszawie.

(TETRACYCLINE, prep. of
sub-surface fermentation of Streptomyces aureofaciens (Pol))
(STREPTOMYCES,
aureofaciens, sub-surface fermentation in tetracycline
prod. (Pol))

EMILIANOWICZ-CZERSKA, Wladyslawa; KOTIUSZKO, Danuta

Production of an antibiotic from the neomycin group by the mutant H-11 of Streptomyces fradiae species obtained by the action of chlorinated hydantoins. Med.dosw.mikrob. 13 no.2:173-181 '61.

1. Z Instytutu Antybiotyków w Warszawie.

(ANTIBIOTICS chem) (STREPTOMYCES)
(HYDANTOINS pharmacol)

1. KOTISHEVSKIY, I. A.
2. USSR (600)
4. Tea
7. Introduction of the tea plant into new districts, Sbor. stud. rab. Umansk. sel'khoz. inst, No .1, 1951.
9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

Distr: 4E3d/4E3b 1

Calculation of the viscosity of organic liquids. J. Kotlíček and J. Marek. *Chem. průmysl* 5, 320-2 (1955); *Chem. Zvesti.* 129, 3554 (1955).—The Papkov equation $\eta = (Sp/M)^{1/2}$ (C.A. 30, 1277¹) is expanded, and a method is elaborated according to which the viscosity of org. substances can be calcd. approx. from their known phys. consts. The value S is the sum of the consts. of the atoms and of the structural elements of the mols.; the S values can be utilized to calc. the viscosity of satd., unsatd. halogenated, aliphatic, and aromatic hydrocarbons, of alcs., aldehydes, ketones, esters, acids, ethers, as well as of some compds. contg. S and N. Deviations for alcs. and fatty acids show the influence of assocn., which can be taken into consideration. Compds. contg. N and S and having strongly polar groups or H bridges do not fit into this system. The differences between measured and calcd. values for all investigated materials amount to approx. $\pm 20\%$, at the most $\pm 50\%$. These materials are pentane, octane, decane, isoprene, cyclohexane, benzene, ethylbenzene, tetrahydronaphthalene, CHCl_3 , C_2HCl_3 , PrCl , PhCl , EtBr , *m*-bromotoluene, MeI , PhI , MeOH , EtOH , BuOH , isoamyl alc., acetone, MeCOEt , acetic, propionic, butyric, and valeric acids, methyl formate, BuOAc , PrOEt , 1,3-dioxane, Et_2NH , dimethylaniline, nitromethane, PhNO_2 , *o*-nitrotoluene, pyridine, CS_2 , and thiophene. The following at. consts. are given: C +5.5; H -0.9; O +1.5; Cl +3.5; Br +6.0; I +9.0; N +5.5; and S +2.0; and the following structural consts.: chain branching +1.0; C:C. -4.0; >C:O -1.5; a 6-membered ring attached to a 6-membered ring +1.0; and naphthalene ring without double bonds +5.0. For fatty acids the calcd. S value is 1.4, for aliphatic alcs. 2.0.

P. X. G.

KOTISEK, J.; MAREK, J.

Calculation of the viscosity of organic liquids. p.330

CHEMICKY PRUMYSL. (Ministerstvo chemického prumyslu) Praha

Vol. 5, no. 8, Aug. 1955

East European Accessions List

Vol. 5 No. 1

Jan. 1956

KOTIS, J. (Czechoslovakia)

Socialist international devision of labor in the field of textile
industry. Probleme econ 17 no. 4:Supplement:46-51 Ap '64.

KOTINSKIY, G. P.

PA 42/4917

USSR/Electricity
Power Plants, Electric
Electrical Equipment

Feb 49

"Adjustable Distributive Devices," G. P.
Kotinskiy, Energiomontazhneft, 2 pp

"Energet Byul" No 2

Rapid development of oil fields necessitates
wide use of electric power. For this reason
efficient distributive points are required.
Describes a distributive assembly developed in
1948. Performance under actual field conditions
at Grozneft, Dagnest and Krasnodarneft has been
very satisfactory. Distributive unit operates

42/4917

USSR/Electricity (Contd)

Feb 49

on 6 kv, and is hooked up to a 35.6-kv substation.
Sketch shows oil-filled cutout switch.

42/4917

Properties of Chemical Fibers

S/183/60/000/005/007/007
B028/B054

4) The shearing modulus was checked by torsional vibrations with a KM-20 (KM-20) pendulum-disk device. 5) Bending-stress durability was tested with a DP-15 (DP-15) device at 110 cycles per minute and a stress of 5 kg/mm². A "Sinus" device was used for elementary fibers at a stress of 10 kg/mm². 6) Wear resistance was tested by grinding a thread until breaking on a corundum disk at 160 rpm. 7) Stability to ultraviolet light was determined by 20 hours' irradiation with a ПРК-2 (PRK-2) mercury vapor lamp. 8) The elasticity of the fiber mass was tested in a cylinder by volume change under a load of 70 kg for 60 min. Relaxation lasted 30 min; the remaining volume was measured. 9) Moisture content of the fiber by absolute drying in a drying chamber at 105-110°C (chlorine fibers at 70°C). The material had been previously stored for some time at an air moisture of 65% and a temperature of 20±2°C. Data are given in % referred to the total dry substance. 10) The specific heat was determined by an adiabatic calorimeter. 11) A differential thermal analysis yielded data on the temperature range of melts and crystallization. A table comprising 14 pages lists results and X-ray patterns of fibers of viscose, acetate cellulose, caprone, anide, enanth, pelargone, undecane, polyamides,

Card 2/3

S/183/60/000/005/007/007
B028/B054

AUTHORS: Demina, N. V., Gorbacheva, V. O., Kotina, V. Ye.,
Ukhanova, Z. V.

TITLE: Properties of Chemical Fibers

PERIODICAL: Khimicheskiye volokna, 1960, No. 5, pp. 40-41

TEXT: This paper describes testing methods for chemical fibers. All mechanical properties of fibers were tested at an air moisture of $65 \pm 1\%$ and an air temperature of $20 \pm 2^\circ$. The following testing methods are indicated: 1) Control of stability and elongation of threads on pendulum-type tensile-testing machines at a distance of 500 mm between the strainers and an average time until breaking of 15 sec. ГОСТ 6611-55 (GOST 6611-55). Impact tensile-testing machines were used for staple fibers. 2) The deformation (expansion) modulus was determined from the ratio between load and relative deformation for threads elongated by 3%. 3) Elasticity of threads was tested by a dynamometer. Threads were stretched by 4% and 10% of their original length, left in this state for one minute, and relaxed for one minute; the remaining elongation was measured. ✓

Card 1/3

Water Method for Spinning Nitron Staple Fiber S/183/60/000/004/007/014/XX
B004/B075 J

ASSOCIATION: VNIIV (All-Union Scientific Research Institute of Synthetic
Fibers)

Card 4/4

Water Method for Spinning Nitron Staple Fiber S/183/60/000/004/007/014/XX
B004/B075

difficulty could be eliminated by using precipitants with high molecular weights and complex steric structures. Since, however, the Soviet Nitron staple fiber production is based on the use of water as precipitant, experiments were made at the authors' institute to improve the quality of the fiber by modifying the method. A precipitating bath with 50-60% dimethyl formamide was introduced and the temperature was lowered to 10-15°C. Furthermore, all relaxation processes were eliminated as long as the fiber contained an excessive amount of water. The fibers were washed with water of a maximum temperature of 40°C. After drying and oiling, the fiber was embossed by overheated vapor. Some batches of fibers were produced by this method: metric number 2600-3500, breaking length 26-32 km, elongation 17-28%. The quality of these fibers was much higher than that of fibers treated with hot baths causing relaxation. A knitting yarn No. 32/2 was produced by a doubling winding frame of the type TKM-8 (TKM-8) which was processed in the experimental workshop of the VNIITP (Scientific Research Institute of the Textile Industry) and the Ivanteyevskiy trikotazhnyy tekhnikum (Ivanteyevo Technicum for Tricot Manufacture). It was found that the quality of the products made from the fiber obtained by the modified method was much higher. There are 2 tables and 6 Soviet references. ✓

Card 3/4

Water Method for Spinning Nitron Staple Fiber S/183/60/000/004/007/014/XX
B004/B075

precipitant	precipitate in % of solution
dichloroethane	87.5
dichloroethane and paraffin oil	61.8
polychlorides	72.2

Water is especially strongly absorbed by the fiber. The following results were obtained by adding dimethyl formamide to water:

precipitant	precipitate in % of solution
water	95.3
water and 20% dimethyl form- amide	77.0
water and 40% dimethyl form- amide	70.4
water and 60% dimethyl form- amide	64.5
water and 80% dimethyl form- amide	59.1

The fiber precipitated in water contains only 20% of fiber substance. This

Card 2/4

S/183/60/000/004/007/014/XZ
B004/B075AUTHORS: Kotina, V. Ye., Bunareva, Z. S., Kosova, R. M.

TITLE: Water Method for Spinning Nitron Staple Fiber

PERIODICAL: Khimicheskiye volokna, 1960, No. 4, pp. 10-13

TEXT: In separating Nitron fibers diffusion processes take place which are influenced by the molecular weight and the steric factors of the precipitant. Especially water diffusion into the fiber loosens its structure and leads to a high water content in the fiber, thus reducing its quality. Therefore, the authors studied the effect of various precipitants, and the intensity of occlusion of the precipitants in polyacrylonitrile fiber. They precipitated a 15% solution of polyacrylonitrile in dimethyl formamide. The weight of the precipitate was determined and converted to the weight of the initial solution in %:

precipitant	precipitate in % of solution
water	98.4
glycol	58.6
synthetic alcohols	24.6

Card 1/4

KOTINA, V.Ye.; KLIMENKOV, V.S.; DEMINA, N.V.; KARATCHIKOVA, A.V.

Changes in properties of nitron silk during thermal stress
relaxation. Khim.volok. no.1:30-32 '59. (MIRA 12:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna.

(Textile fibers, Synthetic--Testing)

SOV/76-32-10-4/39
Some Remarks on the Influence of the Deformation Upon the Orientation of High
Polymer Substances

place a loosening without orientation.

There are 2 figures, 1 table, and 11 references, 8 of which
are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna, Moskva (All-Union Scientific Research Institute of
Synthetic Fibers, Moscow)

SUBMITTED: March 17, 1956

Card 3/3

SOV/76-32-10-4/39

Some Remarks on the Influence of the Deformation Upon the Orientation of High Polymer Substances

expansion process of the sample can take place by other means than an orientation of the molecules. Some microphotographs of the cross sections of expanded "Capron" and "Soviden" fibers are given. The normally expanded fibers have a uniform cross section, whereas with those expanded after a certain loss of their expansibility two clearly separated zones were observed. The loss of expansibility due to aging takes first place in the inner part of the fiber. The microphotograph of the cross section of a jet of a concentrated solution of polyacrylonitrile in dimethyl formamide is also given. The small air bubbles artificially placed are more dense in certain zones of the cross section, which fact is explained by the influence of mechanical stresses. The swelling of the shell and of the nucleus as a function of the expansion was also investigated microscopically; the results obtained are given in a table. The expansion caused a decrease in the swelling of the nuclear layer and an increase in the swelling of the fiber shell. The decrease of the capability of swelling is explained by a packing of the structure, caused by an orientation of the substance of the nuclear layer. In the fiber shell there takes

Card 2/3

5(4)

AUTHORS:

Kotina, V. Ye., Shelepen', I. N.

SOV/76-32-10-4/39

TITLE:

Some Remarks on the Influence of the Deformation Upon the Orientation of High Polymer Substances (Nekotoryye zamechaniya otnositel'no vliyaniya deformatsii na oriyentatsiyu vysokopolimernykh veshchestv)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 10, pp 2247-2250 (USSR)

ABSTRACT:

The orientation of the molecules of high polymer substances can take place by a condensation as well as by a loosening of the structure (Ref 1). Mechanical stresses formed in polymer films were investigated by V. A. Kargin, P. V. Kozlov and others (Ref 2). V. A. Kargin and G. L. Slonimskiy (Ref 7) observed that the aging process is activated by mechanical deformations. Preston (Ref 9) assumed that as a consequence of the formation process the shell of the viscose fiber had a tighter structure than the nucleus. This difference in the density of the structure was also observed with the acetate and polyacrylo-nitrile fiber (Ref 10). It must, however, be taken into account that a loosening of the structure of high polymer substances in the

Card 1/3

KOTINA, V.Ye.

KONKIN, A.A.; KOTINA, V.Ye.; DEMINA, N.V.

Effect of the scale factor on the properties of man-made fibers.
Tekst. prom. 17 no.8:20-23 Ag '57. (MLRA 10:9)
(Textile fibers, Synthetic--Testing)

KOTINA, V.Ye.;SHELEPEN', I. N.

~~Internal stresses in man-made fibers.~~ Tekst. prom. 17 no.4:17-19
Ap '57. (MLRA 10:4)
(Textile fibers, Synthetic--Testing)